Amendments to the Claims

A complete list of pending claims follows, with indicated amendments:

1. (Currently Amended) A method for updating ~~an element~~ the firmware of a storage drive of a fault tolerant drive array, comprising the steps of:

updating the ~~element~~ firmware of a spare storage drive;

substituting the spare storage drive for a first storage drive in the drive array having ~~an~~ unupdated ~~element~~ firmware, wherein the spare storage drive functions as a drive of the fault tolerant drive array, and wherein, upon a write to the spare storage drive during the period that the spare storage drive is present in the drive array, modifying data in the spare storage drive;

updating the ~~element~~ firmware in the first storage drive; and

substituting the first storage drive for the spare storage drive.

2-3. (Cancelled).

4. (Currently Amended) The method for updating ~~an element~~ the firmware of a storage drive of a fault tolerant drive array of claim 1 ~~3~~, wherein the drive array operates according to a RAID Level 5 storage methodology.

5. (Currently Amended) The method for updating ~~an element~~ the firmware of a storage drive of a fault tolerant drive array of claim 4, further comprising the step of, upon a read to the spare storage drive during the period that the spare storage drive is present in the drive array, building the content of the spare storage drive with reference to the content of the remainder of the storage drives of the drive array.

6. (Currently Amended) The method for updating ~~an element~~ the firmware of a storage drive of a fault tolerant drive array of claim 1, further comprising the step of building the

content of the first storage drive with reference to the content of the remainder of the storage drives of the drive array.

7. (Currently Amended) The method for updating ~~an element~~ the firmware of a storage drive of a fault tolerant drive array of claim 6, wherein the step of building the content of the first storage drive with reference to the content of the remainder of the storage drives of the drive array comprises the step of building the content of the spare storage drive by performing for each strip of data in the spare storage drive an exclusive-OR calculation on the remainder of the strips of each stripe in the storage drive.

8. (Currently Amended) The method for updating ~~an element~~ the firmware of a storage drive of a fault tolerant drive array of claim 6, further comprising the steps of:

providing a list of those addresses in the spare storage drive that include data that was modified during the period that the spare storage drive was substituted for the first storage drive; and

writing the contents of those addresses in the spare storage drive to the corresponding addresses in the first storage drive.

9. (Currently Amended) A method for updating the firmware of one or more storage drives in a fault tolerant drive array, comprising the steps of:

updating the firmware of a spare storage drive;

substituting the spare storage drive for a first storage drive of the drive array, wherein the spare storage drive functions as a drive of the fault tolerant drive array, and wherein, upon a write to the spare storage drive during the period that the spare storage drive is present in the drive array, modifying data in the spare storage drive;

updating the firmware of the first storage drive; and

substituting the first storage drive for the spare storage drive of the drive array.

10. (Currently Amended) The method for updating the firmware of one or more storage drives in a fault tolerant drive array of claim 9, further comprising the step of building the

content of the first storage drive on the basis of the content of the other storage drives of the drive array.

11. (Currently Amended) The method for updating the firmware of one or more storage drives in a fault tolerant drive array of claim 10, further comprising the steps of:

providing a list of those addresses in the spare storage drive that include data that was modified during the period that the spare storage drive was substituted for the first storage drive; and

writing the contents of those addresses in the spare storage drive to the corresponding addresses in the first storage drive in conjunction with the step of substituting the first storage drive for the spare storage drive of the drive array.

12. (Currently Amended) The method for updating the firmware of one or more storage drives of a fault tolerant drive array of claim 11, further comprising the steps of:

substituting the spare storage drive in the drive array for a storage drive having unupdated firmware;

building the content of the spare storage drive on the basis of the content of the remainder of the storage drives of the drive array; and

updating the firmware of the storage drive having unupdated firmware;

substituting the newly updated storage drive for the spare storage drive; and

providing a list of those addresses in the spare storage drive that include data that was modified during the period that the spare storage drive was substituted for the first storage drive; and

writing the contents of those addresses in the spare storage drive to the corresponding addresses in the first storage drive in conjunction with the step of substituting the first storage drive for the spare storage drive of the drive array.

13. (Currently Amended) The method for updating the firmware of one or more storage drives of a fault tolerant drive array of claim 12, wherein the steps set out in claim ~~15~~ 12 are repeated until each storage drive of the drive array includes updated firmware.

14. (Currently Amended) The method of updating the firmware of one or more storage drives in a fault tolerant drive array of claim 12 ~~15~~, wherein the step of building the content of a storage drive in the drive array is accomplished by performing, for each strip of data in the effected storage drive, an exclusive OR calculation on the remainder of the strips of each stripe in the storage drives of the drive array.

15. (Currently Amended) A method for updating the firmware of one or more storage drives in a fault tolerant drive array, comprising the steps of:

updating the firmware of a spare storage drive;

substituting the spare storage drive in the drive array for a storage drive having unupdated firmware, wherein the spare storage drive functions as a drive of the fault tolerant drive array, and wherein, upon a write to the spare storage drive during the period that the spare storage drive is present in the drive array, modifying data in the spare storage drive;

updating the firmware of the storage drive having unupdated firmware;

substituting the newly updated storage drive for the spare storage drive; and

building the content of the newly updated storage drive on the basis of the content of the remainder of the storage drives of the storage array.

16. (Currently Amended) The method for updating the firmware of one or more storage drives in a fault tolerant drive array of claim 15, wherein the steps set out in claim 15 are repeated until each storage drive of the drive array includes updated firmware.

17. (Currently Amended) The method of updating the firmware of one or more storage drives in a fault tolerant drive array of claim 15, further comprising the step of, upon a read to the spare storage drive, building the content of the accessed portion of the spare storage drive.

18. (Currently Amended) A method for updating the firmware of the storage drives of each fault tolerant drive array of a shared storage unit, comprising the steps of:

updating the firmware of a spare storage drive;

identifying a drive array having at least one storage drive with unupdated firmware;

substituting the spare storage drive for a storage drive having unupdated firmware, wherein the spare storage drive functions as a drive of the fault tolerant drive array and wherein, upon a write to the spare storage drive during the period that the spare storage drive is present in the drive array, modifying data in the spare storage drive;

updating the firmware of the selected storage drive;

replacing the spare storage drive with the selected storage drive;

building the content of the selected storage drive;

repeating the steps of substituting the spare storage drive for a storage drive having unupdated firmware; updating the firmware of the selected storage drive; and building the content of the selected storage drive until each drive of the identified storage array has updated firmware; and

repeating the steps of identifying a drive array having at least one storage drive with unupdated firmware, substituting the spare storage drive for a storage drive having unupdated firmware; updating the firmware of the selected storage drive; and building the content of the selected storage drive until all storage drives of all drive arrays in the shared storage unit include updated firmware.

19. (Currently Amended) The method for updating the firmware of the storage drives of each fault tolerant drive array of a shared storage unit of claim 18, ~~further comprising, following the step of replacing the spare storage drive with the selected storage drive,~~ wherein the step of building the content of the selected storage drive occurs on the basis of the content of the other storage drives of the drive array;

20. (Currently Amended) The method for updating the firmware of the storage drives of each fault tolerant drive array of a shared storage unit of claim 18, further comprising the steps of:

providing a list of addresses modified in the spare storage drive during the period that the spare storage drive is included in the drive array; and

writing the content of the modified addresses of the spare storage drive to the corresponding addresses in the selected storage drive in conjunction with the step of replacing the spare storage drive with the selected storage drive.

21. (New) The method for updating the firmware of one or more storage drives in a fault tolerant drive array of claim 15, wherein the drive array operates according to a RAID Level 5 storage methodology.

22. (New) The method for updating the firmware of the storage drives of each fault tolerant drive array of a shared storage unit of claim 18, wherein each drive array operates according to a RAID Level 5 storage methodology.